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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,178	02/27/2002	Robert K. Wolf	053168-5023	1415

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EXAMINER

CONNELLY CUSHWA, MICHELLE R

ART UNIT PAPER NUMBER

2874

DATE MAILED: 04/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/085,178

Applicant(s)

WOLF ET AL.

Examiner

Michelle R. Connelly-Cushwa

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Response to Amendment

Applicant's Amendment filed November 3, 2003 has been fully considered and entered.

Drawings

Twenty-five (25) sheets of formal drawings were filed on November 3, 2003 and have been accepted by the Examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 4 are rejected under 35 U.S.C. 102(e) as being anticipated by Kner et al. (US 6,327,287 B1).

Regarding claims 1 and 4; Kner et al. disclose an optical transmitter (tunable semiconductor laser system; see Figures 2, 3 and 4A, and column 5, line 15, through column 6, line 42) comprising:

- a planarized header (substrate or chip, 22, see Figure 4A and column 5, line 62, through column 6, line 4);

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- a laser (12) mounted on a plane of the planarized header, wherein an axis of light emitted from the laser is parallel to the plane; and
- a temperature sensor (16) located on the planarized header for generating temperature data over time; and
- laser output power control means (control loop, 18, and tuning member, 14), receiving the temperature data from the temperature sensor (16), for adjusting the output power of the laser based on the temperature data;
- wherein a temperature of the laser is obtained from an output of the temperature sensor without application of an offset to the output of the temperature sensor; and
- wherein the laser (12) is a semiconductor laser.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 3 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kner et al. (US 6,327,287 B1).

Regarding claims 2 and 3; Kner et al. discloses all of the limitations of claims 2 and 3, except for the temperature sensor being within 2.5 mm or within 1 mm of the laser, respectively.

Applicant does not specify that placing the temperature sensor within 2.5 mm or within 1mm of the laser solves any stated problem or is for any particular purpose (see page 57, lines 1-16 of the present application), but only that "the temperature sensor is positioned as close as practical (e.g., less than several millimeters, such as 0.6mm) from the center of the laser".

One of ordinary skill in the art would have recognized that the closer the temperature sensor is to the laser, the more accurate the sensed temperature of the laser, since heat dissipates with distance. Therefore, It would have been obvious to one having ordinary skill in the art at the time the invention was made to place the temperature sensor within 2.5 mm or within 1 mm of the laser in the invention of Kner et al., since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art (*In re Aller*, 105 USPQ 233) and Applicant has not disclosed that placing the temperature sensor within 2.5 mm or within 1 mm solves any stated problem or is for any particular purpose.

Regarding claims 5-7; In column 5, lines 33-43, and in column 6, lines 27-42, Kner et al. discloses that the current is adjusted in accordance with a changed in the temperature data to maintain the output power of the laser substantially constant over time, in accordance with predefined current values for known temperatures, and in accordance with a change in the temperature data.

Kner et al. discloses all of the limitations of claims 5-7, except for the current specifically being a DC bias current or an AC current. One of ordinary skill in the art

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would have found it obvious to adjust either a DC bias current or an AC current supplied to the laser (12) in the invention of Kner et al., since Kner et al. only discloses that the current is adjusted, not that the current is a DC bias current or a AC current, it appears that the invention would perform equally well whether the current adjusted is a DC bias current or an AC current, and the current must necessarily be either a DC bias current or an AC current in the invention of Kner et al.

Response to Arguments

Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Uchida (US 5,974,064) discloses a temperature compensated laser diode transmitter circuit including a driver circuit for supplying an AC driver current to the laser diode, and a temperature sensor (thermistor) arranged to sense the temperature of the laser diode, wherein the current supplied to the laser diode is adjusted in accordance with the sensed temperature (see the abstract); and Nakano (US 6,292,497 B1) discloses a laser diode driving method and circuit in which current values for a laser diode are stored at a plurality of temperatures, the values being used to maintain a constant optical output of the laser diode, the temperature of the laser diode is detect, and the laser diode is driven by a current adjusted according to the temperature measurement (see claim 1).

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning the merits of this communication should be directed to Examiner Michelle R. Connelly-Cushwa at telephone number (571) 272-2345. The examiner can normally be reached 9:00 AM to 7:00 PM, Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney B. Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general or clerical nature should be directed to the Technology Center 2800 receptionist at telephone number (571) 272-1562.

MRCC

Michelle R. Connelly-Cushwa
Patent Examiner
March 23, 2004


AKM ENAYET ULLAH
PRIMARY EXAMINER